

Appln. No. Serial No. 09/786,138

Amdt. Dated 5/4/06

Supplement to Second Response in Appln, Reply to Office Action of 11/22/2005

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REMARKS

After submitting the Second Response, it was determined that certain characters in the amendments to the Specification did not print properly. In particular, the ellipses in paragraph Nos. 0015, 0025 and 0029 of the specification were printed as squares in error. Applicants herewith submit a clean copy of amended paragraph Nos. 0015, 0025 and 0029 as follows.

[0015] When the internal status $x(t)$ (where t is a discrete time, $t = 0, 1, 2, \dots$) of the mapping is observed by using an isomorphic transform and quantization expression

$$Y(t) = 2/\pi \times \arcsin(x(t))^{1/2} \times 2^n \quad \dots(3)$$

$Y(t)$ becomes a rational number, and order is observed in the chaos. An integer is included in the rational number. A quantized resolution n may be selected such that $Y(t)$ becomes an integer. A chaos time-series $Y(t)-t$ includes a fractal structure. The present invention utilizes the characteristics of this. In the following explanation, the isomorphic transform and quantized value of the quantized resolution n is expressed as $Y_n(t)$.

[0025] At step 5, when the data retroactive to the sixth generation has been obtained, the isomorphic transform and quantized value of the internal status $x(-6)$ converges to an integer (= 68) plus 0.5000 \dots when the quantized resolution $n = 7$. The internal status $x(0)$ that becomes an irrational number is obtained from the quantized initial value $Y_3(0)$, and the calculation of the inverse calculation expression (5) of the logistic map is executed according to the second bit string $\{y\}_2$. Thus, $Y_7(-6)$ is obtained using the isomorphic transform and quantization expression (3). In this case, an integer (= 68) (this means a value excluding 0.5) becomes a compressed code.

[0029] On the other hand, the expansion processing of a compressed code is a process opposite to the process of generating a compressed code. Therefore, the process opposite to the arrows shown in Fig.1 is carried out. First, an irrational number $x(-6)$ is obtained by the

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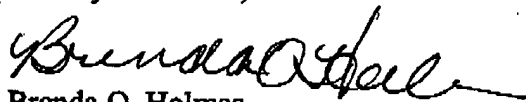
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inverse transform expression (4) of isomorphic transform and quantization of $Y_7(-6)$. In this case, it is necessary to have 0.500 . . . added to the integer.

CONCLUSION

The foregoing is submitted as a complete response to the Office Action identified above. If there are any issues that can be addressed via telephone, the Examiner is asked to contact the undersigned at 404.685.6799.

Respectfully submitted,



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